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ABSTRACT

The invention concerns a process and an apparatus for continuously producing chlorine dioxide, the process comprising the steps of:

feeding chlorate ions, acid and hydrogen peroxide as aqueous solutions to a reactor;

5 reducing chlorate ions in the reactor to chlorine dioxide, thereby forming a product stream in the reactor containing chlorine dioxide;

feeding motive water to an eductor comprising a nozzle;

bringing the motive water to flow through the nozzle and causing it to flow further through the eductor in an at least partially spiral or helical manner;

10 transferring the product stream from the reactor to the eductor and mixing it with the motive water and thereby forming a diluted aqueous solution containing chlorine dioxide, and;

withdrawing the diluted aqueous solution containing chlorine dioxide from the eductor.